

WASHRAGTM

TM



VOLUME 22 Issue 02
FEBRUARY 2020

 FlexRadio



RX_A ANT1

-4V ALC 0V



S 1 3 5 7 9+20+40

CW 140 NB NR APF QSK AGC-M

1.824.020

MENU

Maestro

RF PWR
25



-4V

S 1 3 5

NB NR

1.5

+32dB

-60

-80

-100

-120

-40dB -30

-25dB Com

Po 25 50

-4V

AL

5s

10s

15s

20s

METERS

+

-

+

-

+

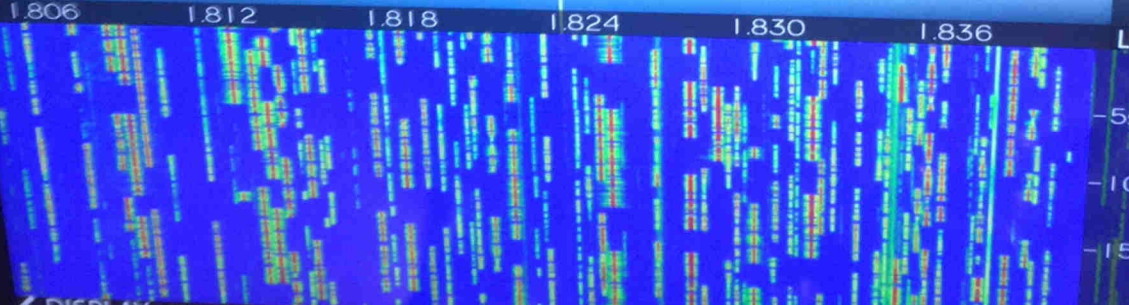
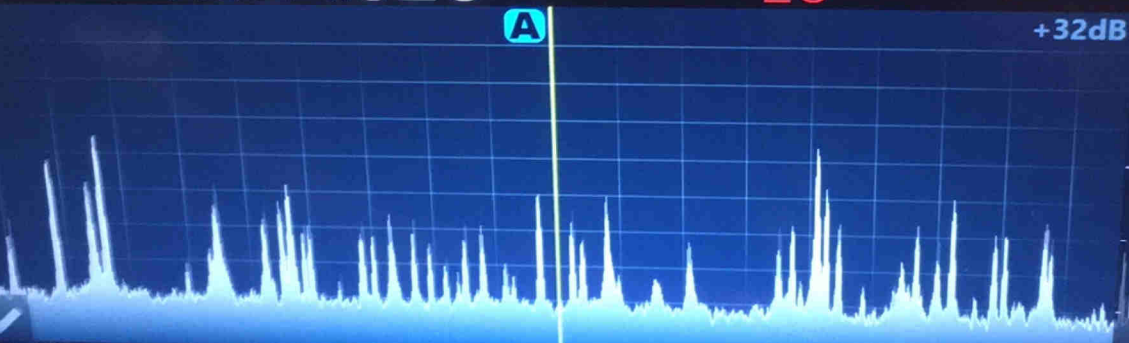
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DISPLAY

METERS

+

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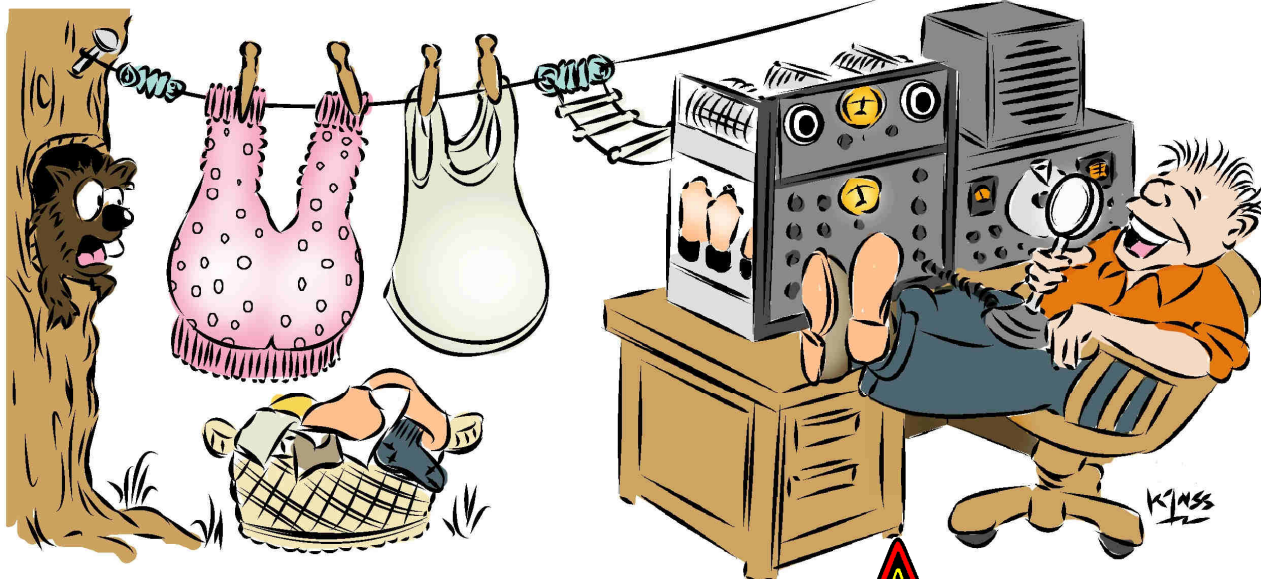
N3SH WA3SH NP2SH/B

www.n3sh.org www.washarc.org

Wireless Association of South Hills



Wireless Association of South Hills



WASHRAG™



VOLUME 22 Issue 02

FEBRUARY 2020

Next Monthly Meeting: Thursday, February 6th, 2020

The next meeting of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** will be on **Thursday, February 6th, 2020**, in the Conference Room at the **St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park, by South Hills Village & Village Square** (map on the back page). The room is available at 6:30 PM. The meeting will be starting at 7:00 PM.

Subjects for the meeting include final planning for **WASHFest 2020**, as well as plans for the rest of the year.

See you there!

Cover Photo: The Flex 6400M being put through it's paces at W3WH's QTH during the CQ 160 Contest. See also Page 7.

Cover Photo courtesy of and © Copyright 2020 Bill Hill W3WH — and it's his rig, not the actual WASHFest first prize!

WASH 2020 OFFICERS

EXECUTIVE COMMITTEE:

President	Tony Romano KB3BYA
VP / Secretary	Dan Campbell K3CMU
VP / Treasurer	Mark Stabryla N3RDV

AND WE COULDN'T DO IT WITHOUT:

N3SH Trustee	Larry Comden K3VX
WA3SH Trustee	Rich Danko N3SBF
NP2SH Trustee	Paul Jordan NP2JF
N3SH WA3SH NP2SH/B QSL Manager	Ron Notarius W3WN
NP2SH 2009 QSL Manager	Carl Schroeder K9CS
VE Team Liaison	Ron Notarius W3WN
Webmaster	Curtis Turner KB3CMT
Quartermaster	Harold Rosenberger K3HCR
WASH FM Net Manager	Chuck Bihun KC3ELA
WASHFest 2020 Committee	Carol Danko KB3GMN, Chairman
	Bill Hill W3WH, Co-Chair
Activities & Operating Events	Rick Bell KB3IAC
Ways & Means	Carol Danko KB3GMN
WASH 2M Contest Chair	Chuck Bihun KC3ELA
Field Day 2020 Coordinator	Glen Roberts KE7FD

CLUB-AFFILIATED REPEATERS, BEACONS, & DIGIPEATERS:

Mt. Lebanon	N3SH / R	146.955 MHz (-)	PL 131.8
North Side	N3SH / R	442.550 MHz (+)	PL 131.8
Canonsburg	N3FB / R	443.650 MHz (+)	PL 131.8
St. Johns, VI	NP2SH / B	28.276 MHz	Propagation Beacon
Canonsburg	N3SH	144.390 MHz	APRS Digipeater

N3SH / WA3SH WASHNet, the weekly on-air net of WASH, meets every

Monday Night, 8:00 PM ET, on the 146.955 & 443.650 repeaters.

All radio amateurs, WASH members or not, are welcome to join in!

THE LEGAL STUFF

"The WASHRag™" (formerly "The Mariner™") is the Official Newsletter of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC. (WASH)**, a 501.C.3 not for profit organization.

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Editor & Publisher: Ron Notarius W3WN

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Ron Notarius W3WN
3395 Rosewood Drive, Castle Shannon, PA 15234-2546
e-mail: newsletter@n3sh.org or w3wn@arrl.net

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The **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** was founded on August 23rd, 1993, as the original **SOUTH HILLS AMATEUR RADIO CLUB**, and operated under that name through 1998. WASH was also known briefly in late 1998 as the **N3SH AMATEUR RADIO CLUB**. It is not in any way affiliated with the "South Hills Amateur Radio Club, Inc." and is not responsible for that group, it's members, or it's actions in any way, shape, or form.

As always, special thanks to the owners & operators of both the N3SH/R Repeaters and the N3FB/R Repeater System for permitting the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** and it's members to use their repeaters for club purposes.

WASH Amateur Radio Club News Briefs

Next WASH VE Test February 23rd

The Next WASH VE exam session will be on **Sunday, February 23rd**, 2020, 10:00 AM, at **WASHFest 2020**, 3735 Buffalo Drive, South Park, PA 15129. Talk-in on the 146.955 MHz repeater. All examiners are ARRL VEC affiliated.

Pre-registration is required due to space limitations.

If you plan on attending the test session, please contact VE Team Liaison Ron Notarius W3WN:

Telephone (412) 572-6723 or E-Mail: w3wn at n3sh dot org

Please bring the following to your test session:

Picture ID or other suitable identification (2 forms of ID required)

Pen / Pencil / Calculator

Original FCC license plus a copy of license (if upgrading)

Original CSCE plus a copy of CSCE (if upgrading)

Check or Cash in the amount of **\$15.00** (payable to: ARRL VEC)

Future test dates: To Be Determined

Tony's Musings

The 2 Meter contest was great!
Thank you to all who participated!

There is only 1 more club meetings before the 25th WASHFest! If you can't make the next meeting please send an e-mail to Carol about which days you are able to attend Setup - Hamfest - cleanup days.

Don't forget the main prize will be a Flex-6400M so spread the word - Need to sell them tickets!!

See you at the March Meeting for The Pizza Social!

— 73, Tony Romano KB3BYA
President, Wireless Association of South Hills, Inc.
N3SH / WA3SH / NP2SH



An article in the *Washington Post* states that the company with "sole rights to salvage artifacts from the RMS Titanic" has gone to court to gain permission to carry out a "surgical removal and retrieval" of the Marconi radio equipment on the ship.

After a century under water, the equipment is in poor shape at best, but the company hopes to restore the radio transmitter to operating condition.

It was a comfortable Saturday morning on January 25th, when once again the **WASH Breakfast Gang** descended on the Eat 'N Park at 3380 Washington Road (US 19) in McMurray. This month's collection of The Usual Suspects included WB4GCS, N3FB, KB3GMU, K3HCR, W3WH & W3WN.

Topics of the morning included travelling via air, back issues, amplifier problems, new grandkids coming, car accidents, buying new cars, a warm winter so far, working the 160 contests, operating the Flex, dues for other clubs, repeater usage, SteppIR antennas, transmitter power supplies, running remote, flying Spirit and Delta, going through TSA at Orlando... and a great deal more.

Our next gathering of the Gang will be on February 22nd, but remember that this month we are NOT returning to the **Eat 'N Park**, 3380 Washington Road (US 19) in McMurray – we will be gathering at the South Park **Eat 'N Park**, 5220 Library Road (Pa 88), officially starting at **8:00 AM**. (And right after breakfast, we head to **WASHFest** to start setting up tables!) While we don't need a "head count" to reserve tables as we've previously done, please let Jim WB4GCS know ahead of time if you are planning on coming... if you don't, though and decide at the last minute, we'll have plenty of room for you! See you there?

OK, so we're coming down on "**crunch time**" for **WASHFest 2020**. Didn't you read about what Punxsutawney Phil said? He didn't see his shadow on Groundhog Day, so that means that **WASHFest** is just around the corner! (Or was that Spring?) In any event, yes, things are humming along. The prizes have been ordered, most of the commercial vendors have committed, the hamfest tables are starting to go REAL fast (if you want one, contact Carol NOW... we really have sold out in advance every year for quite some time now!). But it's the weekend of the event where we all need to pitch in. On Saturday, tables and chairs need set up, equipment and lights need placed, signs have to be put out... on Saturday night and early Sunday morning, we need some helping hands to help vendors bring in their wares, we need ticket sellers, front door greeters, talk-in, ah, talkers, kitchen help... a lot of little things. As we note every year, if everyone who can comes down and lends a hand, even if just for an hour or two, everything gets done, no one gets stressed, our guests (vendors and attendees) come and leave happy, and Carol is very pleased. More details on this will be discussed at the February meeting. If you can't make the meeting but can still help, contact Carol KB3GMN as soon as practical. And, thanks in advance!

And less we forget, there will also be a **VEC test session** at **WASHFest**, starting at 10 AM. As always, we need a few VE's to lend a hand and help run things smoothly. As this will be W3WN's last VEC session as liaison, due to (lack of) time with his new job, we'd also like to make this session a memorable one as well! If you can help, please contact W3WN.

Did you participate in our annual **WASH 2 Meter Simplex Contest** last month? If you did, hope you had fun... Did you send in your log? If you haven't, please get it to Chuck KC3ELA ASAP. Remember, anyone submitting a log will get a free main prize ticket at **WASHFest**, which you will be able to pick up at the club table. Hey, you never know...

A timely reminder... if you notice **interference on the 146.955 repeater**, please make sure you log the date & time and a summary of what you may have heard, and let Tony KB3BYA know. As many of you know, there have been reports of encroachment from users of a repeater on the same frequency in an adjacent state. If it reaches the point where something will need to be said, we (ie Tony, as Club Prez) needs to have something more than "we think we heard something." Certainly no reason why we can't all co-exist, but if a problem crops up, the sooner we can address it and resolve it, the better.

You should soon be hearing more about the upcoming **KDKA Centennial Special Event Station(s)**, scheduled to take place at the end of October and beginning of November 2020. The 1x1 calls have been reserved, and plans are still being worked on. Anyone interested in helping out on the event, be it a planner or an operator, should contact "Radio Free" Bob WC3O ... or better yet, join the Groups.io discussion group he's setup for just that purpose. The event WILL be open to all SWPA amateur radio operators who want to participate, regardless of which club (if any) they belong to.

Plans are also in the works for activating Dr. Frank Conrad's old call (which later became the 'experimental' Westinghouse call for the KDKA Shortwave transmitters) **8XK** and later **W8XK**, throughout the course of 2020, even if it won't be part of the "official" celebration outside of the Special Event dates. These activations, when they happen, will also be open to all SWPA operators. More on that in the coming months.

Join WASH or Renew your Membership Today! Membership Application on Page 15

Minutes, January 2nd Meeting

Dan Campbell K3CMU, Vice President/Secretary, **WASH**

Call to Order: 19:01 hours; Presiding Officer: Tony Romano (KB3BYA)

Pledge of Allegiance Moment of Silence: Silent Keys & Others

Number of Members Present: 20; Numbers of Guests: 0.

COMMITTEE REPORTS

Treasurer: Mark Stabryla, (N3RDV)

Motion to Accept: Dan (K3CMU); Seconded by: Bill (WA3VSS). Accepted: Yes.

Secretary: Dan Campbell (K3CMU):

Are there any corrections to the Minutes: No.

Motion to Accept By: Carol (KB3GMN); Seconded by: Harold (K3HCR)
Passed: Yes

Repeaters: Frank (N3FB): "Are Repeating"

WASHNet: Charles (Chuck) Bihun, III (K3CELA): Attendance is high and participation is good.

Tuesday Night Net: Glen (KE7FD): 2 week hiatus

Contests: Larry Comden (K3VX):

- Chuck (K3CELA): 2 meter January 11th, 2020;
- ARRL CW DX Contest in February, Bill (W3WH) & Larry (K3VX) traveling to St. Kits

Public Service: Mike (WA3PYU): April ACSNet – no information yet.

Newsletter: Ron Notarius (W3WN): Published

Volunteer Examiners: Ron Notarius (W3WN): next exams at **WASH**fest

Ways & Means (including Membership Contributions): Carol Danko (KB3GMN):

- Hamfest: Everything except Flex radio delivered.
- HamFest Breakfast for Saturday & Sunday – need volunteers

.President's Report: Happy New Year!

Old Business: Glen (KE7FD): School not interested in donated radio equipment. Will sell at **WASH**Fest and use proceeds for scholarships.

New Business: Frank Bobro (N3FB): discussed ratings of expensive handhelds. Handhelds may be tested at Hamvention.

Good of the Order: (none)

MOTION TO ADJOURN: Tim (N8NEY) Seconded: Chuck (KC3ELA)

Meeting Adjourned: 19:31 hours

On January 24th, the President signed the "Preventing Illegal Radio Abuse Through Enforcement Act" or the "PIRATE Act." The measure, which amends the Communications Act of 1934, authorizes enhanced penalties for violators. Under the new law, pirate radio broadcasters would be subject to a fine of not more than \$2 million, and violators could be fined up to \$100,000 for each day during which an offense occurs. The new law stipulates that the FCC "shall not decrease or diminish the regular enforcement efforts targeted to pirate radio broadcast stations for other times of the year."

The FCC is to submit to the House Committee on Energy and Commerce and the Senate Committee on Commerce, Science, and Transportation a report summarizing the implementation of this section and associated enforcement activities for the previous fiscal year. The new law also requires "annual sweeps," during which FCC personnel will be assigned to "focus specific and sustained attention on the elimination of pirate radio broadcasting within the top five radio markets identified as prevalent for such broadcasts." The Commission also "shall conduct monitoring sweeps to ascertain whether the pirate radio broadcasting identified by enforcement sweeps is continuing and whether additional pirate radio broadcasting is occurring."

Under the new law, the FCC, in pirate broadcasting cases, will change its rules so that it proceeds directly to issuance of a *Notice of Apparent Liability* (NAL) without first issuing a *Notice of Unlicensed Operation* (NOUO).

The FCC will develop and publish a database of all licensed AM and FM broadcasters, accessible directly from the FCC home page. The FCC is also required to publish a list of "all entities that have received a *Notice of Unlicensed Operation*, *Notice of Apparent Liability*, or forfeiture order," as well as "each entity...operating without a Commission license or authorization."

The law defines pirate radio broadcasting as transmitting within the AM and FM bands without an FCC license, but excluding noncommercial operations in compliance with Part 15. – *American Radio Relay League*



WASH Spotlight: PaQSO



The first planning meeting of Team N3ZK for the 2020 Pennsylvania QSO Party, at the Northstar Restaurant in Imperial, on February 3rd.

Clockwise from left: N3ZK, N3FB, NØVLR, WB4GCS, N3KFD

Photo courtesy of and © Copyright 2020 Paul Lusardi NØVLR

Every month we're going to feature a **WASH** club member, something about them, something they're involved in or a club-related activity that we're involved in, in the **WASH Spotlight**. Submissions for the Spotlight should be sent to Ron W3WN at newsletter@n3sh.org

Monthly WASH Breakfast



Please join us for the next **WASH** Breakfast! We usually get together on the LAST Saturday of every month for a chance to informally sit down, shoot the breeze, compare notes, drink lots of coffee, and just have a good time!

Join us this month at **Eat'n Park**, 3380 Washington Road (US 19), McMurray. Start time is about 8 AM until ????. Monitor 146.955 & 443.659 for talk-in or any last minute changes.

All are welcome, **WASH** members or not, amateurs or not!

Wireless Association of South Hills Membership

2020

K3CMU
K3GW
K3HCR
K3VX
K6DWR
KA3VXM
KB3BYA
KB3CMT
KB3DCO
KB3GMN
KB3GMU
KB3JHR
KC4WTT
N3DFK
N3FB
N3RDG
N3RDV
N3SBF
N7TDX

N9SOJ

NY9H
W3WN
WA3PYU
WA3VSS
WB4GCS

2019

AA3GM
AB3NM
KB3IAC
KB3IVX
KB3ORO
KB3YCX
KC3ELA

KC3GMM
KC3MLC
KC3NWM
KE7FD
N3KFD
N3TDV
N3ZK
N8NEU
NU3Q
W3LE
W3RON
W3WH
WA3WXR
WO3Z

WASH FL
KA3UPY/M
W4ZE
WASH NE
NØPEU
WASH OR
KB3NVL
KB3NVM
WASH OH
N8DPW

WASH TN
K3OL
KE3XB
N3YPB
WASH TX
NB3C
K3LGM
KB3IJX
Jane Wagner
WASH VI
NP2JF

Silent Keys

AB3KA
K3EED
K3LIE
KA3NMG
KB3ENX
KB3FNM
KB3FQT
KB3JHQ
N3CZZ
N3FZ
N3HKQ
N3KEH
N3OBD
N3RNX
N3SKR
N3SRC
N3ZEL
N3XFE
W3ZLK
WA3JPP

If your call should be listed here & isn't, please contact Mark N3RDV

Through February 2nd, 2020
List compiled by
Mark Stabryla N3RDV, Vice President/Treasurer

2020 WASH Upcoming Events Calendar

Club Meetings & Other Significant Events — Subject to Change

February 6 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
February 16 th – 17 th	ARRL DX Contest CW	http://www.arrl.org
February 16 th	Breezeshooter's Groundwave CW	http://www.breezeshooters.org
February 23 rd	WASHFest 2020	Home Economics Building, 3735 Buffalo Drive, South Park 15129
	WASH VE Exams at WASHFest	
March 2 nd	Breezeshooter's Groundwave Phone	http://www.breezeshooters.org
March 2 nd – 3 rd	ARRL DX Contest SSB	http://www.arrl.org
March 5 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
March 16 th	Breezeshooter's Groundwave PSK31 & FT8	http://www.breezeshooters.org
March 28 th – 29 th	CQ WPX Contest SSB	https://www.cqwpw.com
April 2 nd	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
May 7 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
June 4 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
June 6 th —7 th	Breezeshooter's Hamfest	Big Butler Fairgrounds, 1127 New Castle Road (US 422), Prospect PA 16052



Two Rivers ARC Hamfest 2020

Sunday, March 29th, 2020, 8:00 AM—2:00 PM

McKeesport Palisades and Event Center

100 Fifth Avenue, McKeesport, PA 15132

Talk-in on 146.730 PL 131.8 Admission \$5.00

More Information at <http://www.trarc.net>



"Seen" at the January Meeting

Photos Courtesy of and (c)Copyright 2020 Ron Notarius W3WN



QST & the Libraries

Bill Hill W3WH



Chartiers Township, PA, January 6th, 2020 –Until I began working for the local Library system, I had no appreciation of the impact that Libraries make in today's fast moving high tech society. According to Google there are about 116,000 libraries in the USA. Here in SW Pa. our 20 libraries are alive, well and busy.

Recently it occurred to me that if QST was on display with other periodicals, Ham Radio could get a ton of free advertising and perhaps lure some former hams back to the hobby and even better interest newbies in joining the best Hobby in the world (IMHO). My first thought was that the ARRL should send a copy of QST every month to every library but I quickly dismissed that thought as being financially unrealistic. Then I thought that if people like me who read their QST and then put it on the shelf (I have almost 40 years of QST "on the shelf") would take their still current issue to the local library the Library Director would very likely be willing to accept it for display.

I asked my local Library and got a positive reception. So that's where my next issue will end up instead of "on the shelf". It will be no loss to me since I have the digital edition available if I want to refer back to any past issue.

The adage, "It pays to advertise" is still valid and if QST was more widely circulated we might hear " Oh ham radio they still do that?" less.

Our Atlantic Division Director Tom Abernathy W3TOM thinks the idea is worthy of a trial her in SW Pa. so I'm suggesting that all the clubs who receive the **WASHRAG** present the idea to their group, and let's try it. We have nothing to lose and lots of Hams to gain. You will need to make a commitment to faithfully do this EVERY month in order to give it a fair chance for success.

Please let me know how you're doing. I can be reached at w3wh@arrl.org.

FLEX-6400M in Action

Bill Hill W3WH



As you can see, the panadapter of the Flex6400M is teeming with signals. These were noted in the January 2020 CQ 160 contest.

Yes folks, CW is alive, well, efficient and still FUN!

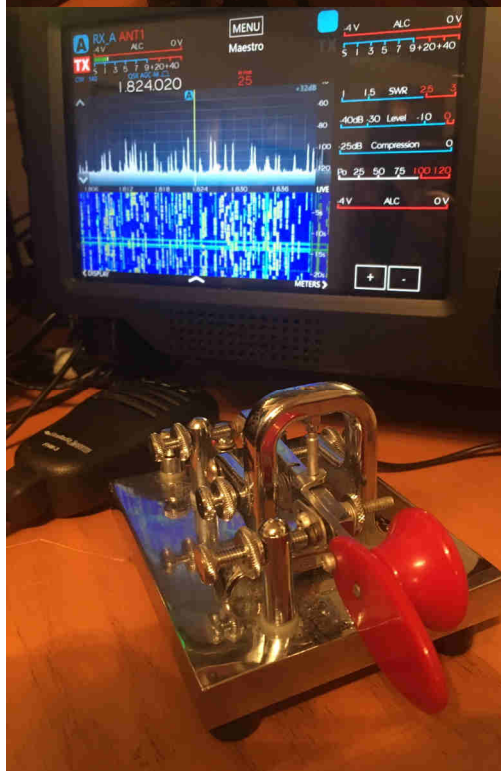
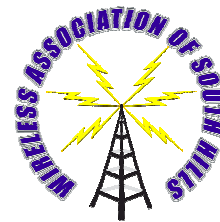
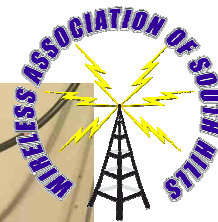
This radio is actually a computer in a box and as such is really flexible (no pun intended) when it comes to setting it up just the way you want it.

For instance, in the recent 160 contest, I was able to reduce the entire screen of the panadapter to 4 kHz. Thus, even on a really crowded band the individual signals are easy to see and tune. Even those among us (me) who are computer challenged (*I'll say! – ed.*) find it a snap to use the Flex 6400M.

If you want to use your PC to control it you can, but it also does a fabulous job of masquerading as a conventional radio.

As you may recall the Flex 6400M w/ATU is the first prize at this year's **WASHFEST**. It's worth buying LOTS of tickets if you would enjoy a top notch piece of gear for your shack.

If you're from the "I never win anything" crowd, have faith that anything can happen. After all I won an Icom-7300 at **WACOM** last November. It CAN happen.



Wolf River Coils SB-1000 TIA Portable Vertical Antenna

Curtis Turner KB3CMT

Pittsburgh, PA, January 25th, 2020 – So, I broke down this past week and purchased a Wolf River Coils SB-1000 TIA portable vertical antenna to use for Parks on the Air and Summits in the Air activations this year. I ordered it on Wednesday January 22nd and it showed up in the mail on Friday the 24th. Overall it looks like a well-made product applying the keep it simple methodology and it is USA made to boot.

The coil form is made of PVC which was blatantly obvious upon opening the package due to the slight waft of PVC cement. Although made of PVC it appears, they machine it cutting threads for the coil form. All the hardware appears to be stainless or aluminum and quality made. The base is threaded for 3 legs which happen to be 3/8-24 so I am thinking maybe testing three no whip Hamsticks in place of the legs down the road. The radiating element is a stainless 102-inch telescoping whip that starts at 3/8-inch diameter tapering down to 1/8 inch at the top and collapses down to around 18 inches long for storage. It also comes with three 33 feet radial wires that attach at the legs via 3/8-inch ring terminals.

Disassembled and packed away everything easily fits with in a small tripod bag I had left from a broken travel tripod that is 23" long and about a 5inch diameter. Which brings me to my one criticism of the product after using it for 4 hours, they could have provided a storage bag... I would have paid a few dollars more.

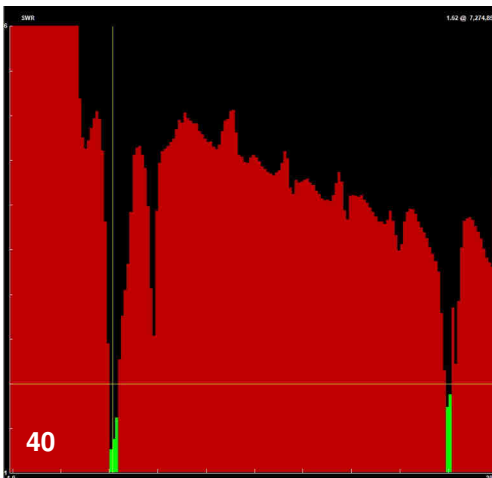


Here are a few pictures of it in the back yard, to close out Day 1 of use.

January 26th, 2020 – For day 2, I did not get to spend much time working with the antenna but I was able to mark out and measure all the bands I plan to use minus 75/80 meters. I will make a table of that data to keep handy for quick changes in case the markings wear off. I think for 75/80 meters I am going to need to make some longer radials as the best SWR I was able to obtain was just over 2:1. That said I was able to obtain 1.5:1 or better SWRs on 6, 10, 12, 15, 17, 20, 30, and 40 meters. I did not try 60 meters based on the initial higher SWR on 75/80 meters.

Working the antenna on SSB today I was surprised with how well it worked out and how quiet it is compared to my DIY vertical. I made several contacts on both 20 and 40 meters of which several were 5/9s. Pleasantly the change from band to band took little more than the time to walk to and from the antenna, which not ideal for operating at home is not a big deal for operating in the field. I understand it is a compromise and has its limitations but for the portability and ease of setup I am happy with the purchase and hope to put it to use portable this summer.

Here are SWR plots from 20 and 40 meters respectively as I anticipate I will use those most. I was able to cover the entire band for both with a single setting for each band, although I could probably tweak it more for a specific portion if needed.



The plot for 20 meters (right) follows this pattern: 1.66:1 @ 12.871MHz, 1.05:1 @ 13.210MHz, 1.04:1 @ 14.058MHz, 1.68:1 @ 14.397MHz.

And the pattern for 40 meters (left) is as follows:

1.27:1 @ 6.935MHz, 1.35:1 @ 7.105MHz, 1.4:1 @ 7.274MHz and 1.63:1 @ 7.311 MHz.

There are a number of additional tweaks I anticipate making with this setup. The first being some additional radials and the second is to acquire some 3/8 inch aluminum rod and make new two foot long legs to replace the one foot long legs on the tripod as well as threading 2 additional two foot rods to use in an effort to raise the coil up four feet and producing a more "center" loaded antenna. The longer legs and center loading rods are available as a kit from Wolf River Coils as well but I figured I would make my own.

I will report back once I have gotten some more operating time with the antenna as well as new SWR plots with the updates to it.

February 2nd, 2020 – I got a bit of time this afternoon to work on the antenna, so my first order of business was to get the four feet long 3/8 aluminum rods that I purchased from Ace Hardware in to two feet lengths.

After getting them cut, I used a cheap tap and die kit from Harbor Freight to thread one and a half inches on one end of 3 of the rods to use for larger tripod base legs. I then threaded 2 additional rods on both ends to use as extensions to get the coil raised four feet off the base. I used stainless coupling nuts that I also purchased from Ace Hardware to make the union between the rods and for the coil to thread into on top.

The next order of business was to cut some two-inch aluminum angle iron into two-inch lengths and drill a 3/8-inch diameter hole in one side and two 1/4-inch holes in the other to use as radial attachment points on each leg. The angle was captured between 2 nuts and star washers on each tripod leg.

Continued on Page 9



Wolf River Coils SB-1000 TIA Portable Vertical Antenna

Continued from Page 8



Before digging up wire for radials I disassembles all part of the antenna and applied a dollop of Ox-Gard, anti-oxidant compound to all threaded joints. This is especially important since the antenna is made of mixed metals, mainly stainless and aluminum.

After reassembling the antenna (left), I added two ¼-inch by one and a half inch long bolts to each of the radial angle brackets, which are let on by nuts that use wing nuts to trap the spade or ring terminals on the radials.

After all this I was eager to get the antenna outside before darkens started descending upon me, so I grabbed 2 pieces of wire I had cut to use with my travel 1:1 Balun for 10m and 2 lengths of inch and a half ground braid that I have cut to length for 20m for use with the same Balun.

Here (below) are the SWR plots for this setup. I did try 80m again, which was a little better but still not as good as I would like to see it. My next step is to cut some longer radials. I am thinking I would like to get to somewhere between 16-20 radials for portable deployment.

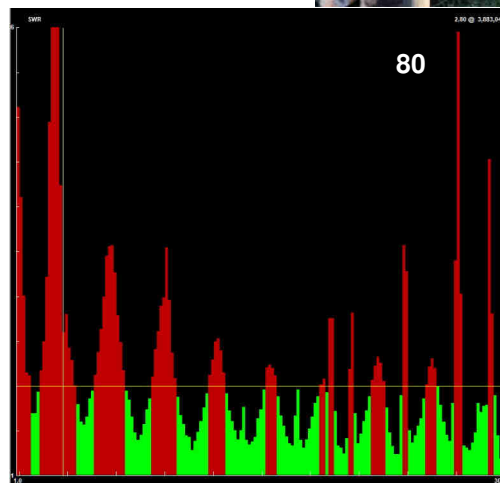
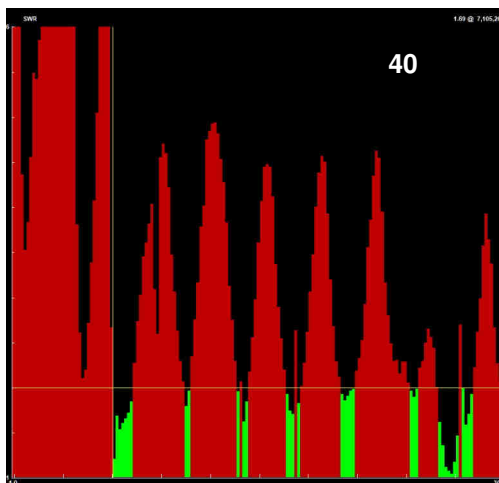
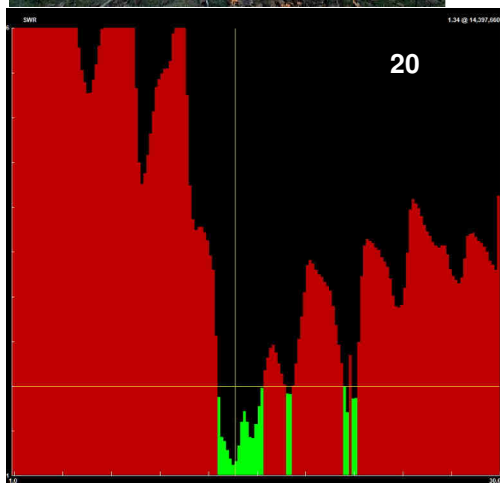
20 Meters SWR Plot: 1.43:1 @ 13.380, 1.38:1 @ 13.549, 1.14:1 @ 14.058, 1.35:1 @ 14.397, 1.68:1 @ 14.736, 1.72:1 @ 15.584, 2:1 @ 15.923

40 Meters SWR Plot: 1.24:1 @ 6.935, 1.69:1 @ 7.105, 1.61:1 @ 7.274, 2:1 @ 7.614

80 Meters SWR plot: 2.35:1 @ 3.713, 2.33:1 @ 3.833, 1.81:1 @ 4.222, 1.39:1 @ 4.900, 1.65:1 @ 5.578, 1.98:1 @ 5.918

So, 80 Meters still seems a bit short, but we will see if radials help.

And with that I am going to close out this testing session and get some on-air time.



All Photos & Graphs Courtesy of and © Copyright 2020 Curtis Turner KB3CMT

AMSAT-NA President K6WAO Steps Down

American Radio Relay League

Newington, CT, January 31st, 2020 – [AMSAT-NA](#) President Joe Spier K6WAO, has resigned, citing personal reasons. Spier, of Weimar, California, had served as AMSAT's president since October 2017. Prior to that, Spier was AMSAT's executive vice president and vice president of Educational Relations. He also served as an [AMSAT News Service](#) editor and as a member of the [ARRL](#) Education Team. Executive Vice President Paul Stoetzer N8HM, will assume the office of president until the next meeting of the AMSAT Board of Directors.

"I want to thank Joe for his many years of service to AMSAT in a variety of roles," Stoetzer said. "I especially want to recognize his efforts to mark AMSAT's 50th anniversary with special events at [Dayton Hamvention](#)® and the AMSAT Symposium. His leadership in bringing together a variety of figures from the history of amateur radio in space in Arlington, Virginia, this past fall helped to make the Symposium a very special event."



New Amateur Extra Question Pool Released

American Radio Relay League

Newington, CT, January 27th, 2020 – The new Amateur Extra-class license examination question pool, effective from July 1st, 2020, through June 30th, 2024, has been released and is available at the National Conference of Volunteer Coordinators ([NCVEC](#)) website.



The [2020 – 2024 Extra-class pool](#) incorporates significant changes compared to the current 2016 – 2020 question pool, which expires on June 30th. The number of questions in the pool was reduced from 712 to 622. The result was 239 modified questions, 49 new questions, and 139 questions removed due to changes in what was felt to be an abundance of outdated questions, while areas of new technology and subjects were added.

In addition, an effort was made to balance the difficulty level, removing or replacing some questions deemed too easy or too difficult compared to the rest of the pool. The 2020 pool has 10 diagrams, which have been renumbered because the new question pool has two fewer than the 2016 question pool.

WPA Section News

Joe Shupienis W3BC, ARRL Western Pennsylvania Section Manager



Falls Creek, PA, January 24th, 2020 – HB 37: Pennsylvania Legislators in the House recently passed legislation

(HB-37) prohibiting the use of electronic communication devices by drivers of motor vehicles, but it does provide one exemption: CB radios in commercial vehicles. No other exemptions are in the legislation, including Amateur Radio or Land Mobile radio — whether permanently installed or hand-held. The bill was passed by the PA House last week, and is now on its way to the Pennsylvania Senate, which will process it over the next few months.

EPA Section Manager George Miller W3GWM, Atlantic Division Vice-Director Bob Famiglio K3RF, ARRL HQ and I are working together to prepare a formal statement to the Senate, and expect to deliver it very soon.

Many of our Pennsylvania radio amateurs are rightly concerned about this and are anxious to express their concerns to our legislators. We urge restraint in exercising your first amendment right to petition the Government, and ask that you please confine your comments to those of a polite, respectful and civil nature. Obscene ranting, name-calling and personal attacks will do much more harm than good.

Better yet, allow your ARRL leaders speak in your name and represent your (and our) best interests to those legislators who will decide the eventual outcome. If a time comes for you to contact your local legislators personally, we will keep you advised.

If you still have a burning desire to contact your State Senator immediately, please be courteous and brief, and stick to the facts:

- There are more than 31,000 federally licensed Radio Amateurs in Pennsylvania
- For the last 100 years, these volunteers have expertly provided public service radio communications, technical expertise and other services to their communities, free of charge
- The use of Amateur Radio by volunteers in their own vehicles has always been permitted by Pennsylvania Law, and exemptions are provided by current legislation now in effect
- PennDOT issues a special automotive License Plate for Amateur Radio Operators as a completely separate category from "personalized plates" and "Press Photographers"
- The Pennsylvania Emergency Management Agency recognizes the unique radio communications capabilities of radio amateurs and calls on them to assist in disasters through the Auxiliary Communications Service of PEMA and local county Emergency Management Agencies

Update: January 28th, 2020 – ARRL leadership in Pennsylvania is actively involved in a process that we hope will conclude shortly with an exemption to the restrictions in House Bill 37 that now await action in the Pennsylvania Senate.

HB 37 as you may know, prohibits the use of handheld devices while driving. The original intent was most likely to eliminate the use of cell phones and texting on cell phones while driving, but an exemption to permit Amateur Radio mobile microphone use was removed from the original bill. It passed the house without the exemption and awaits action in the Senate.

The Eastern and Western Pennsylvania ARRL Section Managers (W3GWM and W3BC), and the Eastern PA ARES Section Emergency Coordinator (WN3LIF) along with ARRL Vice-Director, attorney Bob Famiglio (K3RF Delaware County), are meeting with the Executive Director of the Pennsylvania Senate Transportation Committee January 30th to hammer out an exemption for ham mobile use. We'll report back via email on our progress after the meeting.

Rest assured that your ARRL/ARES leaders are actively engaged in this process and working to ensure that the PA Senate recognizes the vital role Amateur Radio Operators in the Commonwealth play in Emergency Response to incidents and disasters.

Breaking News: January 30th, 2020 – Pennsylvania House Bill 37 was amended on January 14th, removing existing exemptions for Amateur Radio (and other licensed radio service) mobile use by drivers of motor vehicles. The bill is an effort to revise existing Motor Vehicle statutes and expand the definition of distracted driving to include the use of interactive communication devices while operating a vehicle.

This morning ARRL elected officials were in conference with the staff of the PA Senate Transportation Committee, which has received the bill for consideration later this year. Participants included Western Pennsylvania Section Manager Joe Shupienis W3BC, Eastern Pennsylvania Section Manager George Miller W3GWM, Eastern Pennsylvania Section Emergency Coordinator W. T. Jones WN3LIF, Atlantic Division Vice-Director Bob Famiglio K3RF, Jay Silber WA2UAR, and the PA Senate Transportation Committee Executive Director and staff.

During the brief meeting, Atlantic Division Vice-Director Bob Famiglio K3RF suggested the importance of licensed amateur radio mobile communications during emergencies and other public service activities.

It was suggested that the removal of these amateur radio privileges was an unintended consequence of the bill as it now stands.

The legislative staff encouraged us to prepare appropriate wording to correct the omission, for inclusion in the final Senate Bill being considered later this year.

An official press release will be issued later today.

Visit wpa-arrl.org for the latest official news.



Barry Shelley N1VXY ARRL Interim CEO

American Radio Relay League



Newington, CT, January 19th, 2020 – At its meeting this weekend, the ARRL Board of Directors did not elect Howard Michel WB2ITX, as the ARRL Chief Executive Officer.

Beginning Monday, January 20th, Barry Shelley N1VXY, will become interim CEO. Mr. Shelley was ARRL's Chief Financial Officer for 28 years and CEO during 2018 before his retirement. The board has created a search committee to select the next CEO.

More details on this and other matters which took place at the board meeting will be released shortly.



China Telecoms Regulator Proposing to Delete Some Current Amateur Allocations

American Radio Relay League

Newington, CT, January 8th, 2020 – China's telecommunications regulator has proposed amending the *Measures for the Administration of Amateur Radio Stations*, and some amateur bands are in danger of being eliminated. Lide Zhang B18CKU, told ARRL that the proposal would prohibit amateur operation on the 2200-meter band as well as on 146 – 148 MHz, 1260 – 1300 MHz, 3400 – 3500 MHz, 5650 – 5725 MHz, and all bands above 10 GHz.

Radio communications engineer and Chinese Amateur Satellite Group (CAMSAT) CEO Alan Kung BA1DU, told ARRL that government efforts to eliminate some amateur bands are nothing new, but proposals that have been aired for a while now are on the regulatory agency's schedule. Kung said he does not anticipate that all of the bands proposed will be taken away, but he conceded that the climate will "undoubtedly" become increasingly more dangerous for China's amateur radio community.

"The attempt to crowd out the amateur radio bands has a long history throughout the world," he said, "but it may never have become so urgent for the amateur radio community as it is today. We all understand that radio spectrum resources have become a bottleneck for further development." He said today's radio communication industry "is working hard to share spectrum resources." Kung characterized spectrum as "the soil on which amateur radio depends."



Radio Amateurs of Canada Announce a New Section

American Radio Relay League

Newington, CT., January 2nd, 2020 – The number of Sections needed for a clean sweep in the ARRL November Sweepstakes (SS) will rise to 84 in 2020, with the addition of a new Prince Edward Island (PE) Section. Radio Amateurs of Canada (RAC) announced this week that the new Section will become effective on April 1st.



RAC said its Prince Edward Island members have been working for some time to create a separate Section for RAC ARES activities there. The provinces of Nova Scotia and New Brunswick will continue to be in the Maritimes (MAR) Section. In addition to Field Day and Sweepstakes, the new Section in Canada will affect the ARRL 160-Meter Contest but *not* the ARRL 10-Meter Contest, which uses states/provinces for US and Canadian multipliers.

The change will mean that logging software developers will have to update their software to include the PE Section as a valid exchange element for any affected operating events.

RAC also announced an adjustment in two of its Ontario Sections. Effective April 1st, radio amateurs in the City of Hamilton and in the Regional Municipality of Niagara will shift to the Greater Toronto Area (GTA) Section from the Ontario South (ONS) Section.

State QSO Party Challenge Announced

American Radio Relay League

Newington, CT, January 28th, 2020 – The [State QSO Party Challenge](#) is a competition comprised of other contests, namely state and provincial QSO parties. As explained on the website, the annual cumulative score program is open to any radio amateur who participates in any approved state QSO parties (SQPs).

Participants just need to submit their QSO party scores to [3830scores.com](#) to enter the challenge. Participants' cumulative scores will be calculated by totaling up the number of reported contacts and multiplying by the number of SQPs entered in the year to date. Periodic standings will be posted to [3830scores.com](#), the [QSO Party Groups.io forum](#), and the [StateQSOParty.com website](#).

"Using the number of QSO parties entered as a multiplier is expected to encourage radio amateurs to enter more state/province QSO parties," the program's organizers said. "The first SQPs in 2020 are the Vermont, Minnesota, and British Columbia QSO Parties in the first weekend of February."

Entrants must make at least two contacts in a QSO party for it to count as a multiplier. [Full details](#) are available on the State QSO Party Challenge website. Challenge sponsors expressed appreciation to Bruce Horn, WA7BNM, for developing the [SQP Activity Tracker](#) on [3830scores.com](#).



HuskySat-1 Set To Deploy

American Radio Relay League, AMSAT News Service, HuskySat-1 Team

Newington, CT, January 27th, 2020 – The University of Washington's [HuskySat-1](#) 3U CubeSat, launched November 2nd, 2019, is set to deploy on January 31st, after the vehicle that carried it to the International Space Station undocks. HuskySat-1 has remained stowed aboard a Northrop Grumman Cygnus supply vehicle. Within 24 hours after Cygnus' departure from the ISS, HuskySat-1 and [SwampSat 2](#) will be deployed into orbit. After deployment, HuskySat-1's 1,200 bps BPSK beacon on 435.800 MHz should be active and decodable with the latest release of AMSAT's [FoxTelem](#) software. HuskySat-1 is expected to carry out its primary mission before being turned over to AMSAT for amateur radio operation.



HuskySat-1 features a 30 kHz wide V/U linear transponder for SSB and CW. The uplink passband will be 145.910 – 145.940 MHz LSB/CW. The downlink passband will be 435.840 – 435.810 MHz USB/CW (inverting). Telemetry will be transmitted on 435.800 MHz, 1k2 bps BPSK with an experimental downlink at 24.049 GHz. The "Fox-in-a-Box" [FoxTelem](#) software has been updated for HuskySat-1 operation at its [download website](#). The new release now contains the SD card image, FIAB-distro8-V1.08w.zip. This file, when unzipped and written to a 16 GB SD card will provide the latest software for [FoxTelem](#) and will run on a Raspberry Pi 4. The 1.08 versions can switch bands between listening on VHF and UHF, based on which Fox and Husky satellites are overhead at the time.

The linear transponder and telemetry system carried aboard AMSAT's Fox-1E was designed for use in different CubeSats merely by adding an interface adapter for connection to the host bus. Noting the prevalence of CubeSats built and launched by universities and other organizations, AMSAT adopted a goal of "amateur radio in every CubeSat." Interested CubeSat programs wanting to fly an amateur radio

payload may partner with AMSAT to carry one of these modules on their spacecraft.

By providing amateur radio capability, the CubeSat program gets a worldwide ground station network to receive telemetry and experiment data, while the amateur radio community gets a transponder to use in orbit. Additional information is posted on the University of Washington [Husky Satellite Lab site](#).

Tragic Drowning Cuts Short DXpedition

American Radio Relay League

Newington, CT, January 14th, 2020 – DXer Antoine “Tony” N’Yeurt 3D2AG, reported over the weekend that his 11-year-old son had died in an accidental drowning in Rotuma. 3D2AG had been active in a [DXpedition](#) on Rotuma — the 58th most-wanted DXCC entity, according to Club Log. No details of the incident are available. N’Yeurt resides on Fiji but has operated from Rotuma and elsewhere in the past.

John Mitton KK7L, the president of the Utah DX Association (UDXA), said N’Yeurt — a tropical reef scientist — has played a role in making several DXpeditions to the Central Pacific possible, including the upcoming [W8S DXpedition](#) to Swains Island.

“Tony has become a good friend of mine and of UDXA member Jared N7SML, as he has been instrumental in furthering the amateur radio and HF emergency communications initiatives we have been spearheading in Fiji and Tuvalu,” Mitton said. “Raising two young boys, he manages to balance home responsibilities with a demanding university career, research travel, and ham radio, too.”

Mitton said the current 3D2AG/p DXpedition to Rotuma was timed to coincide with a long new year school break, “allowing him to spend some time with his sons and extended family on this very remote Fiji island, while making many DXers happy to log a new one as time permitted.”

Mitton suggested that radio amateurs consider donating to N’Yeurt [via PayPal](#) to assist “with the extraordinary expenses that have surely arisen from this tragedy.” Mitton said N’Yeurt was packing up on Rotuma and would set sail for home on January 14th.



The Perseverance DX Group’s [DXpedition to South Orkney](#), set for February 20th until March 5th, will use the call sign VP8PJ. The group initially announced that it would use VP8/VP8DXU.

“Alan Armstrong VK6CQ, a recent addition to the team, holds the call sign VP8PJ that was issued to him for operation from the British Antarctic Territory,” the DXpedition has announced. “After submission of a copy of Alan’s license, ARRL has issued us a new LoTW certificate for the use of this call from South Orkney for the duration of our expedition.”

[Contact](#) the DXpedition via email

Regulators in Spain are now allowing radio amateurs there to exchange their current longer-format call signs for permanent 2 x 1 call signs, and some familiar Spanish call signs are likely to be changing.

Salva Moreno EA5BB, told ARRL that hams in Spain who decided to make the change are now awaiting the official license documents, so they can use their new call signs on the air. Moreno’s new call sign will be EA5U.

To be eligible, applicants must have held a license issued by Spanish authorities without any sanctions and have at least 15 years of experience in “international amateur radio.”



DX News Briefs



A group of German operators are currently QRV as [HU1DL](#) through 13 February, 160 – 10 (including 60) CW SSB RTTY and FT8. They are concentrating on the low bands. More information and online logs at <https://hu1dl.mydx.de> QSL via DL4SVA.

JJ2RCJ is QRV as [TO3FM](#) from FM5BH’s QTH (NA-107) through 8 February, 80 – 10 primarily FT 8. QSL via JJ2RCJ

[TI9C](#) will be QRV from Cocos Island (NA-012) through 9 February, 160 – 6 SSB & FT8. QSL via XE1B

[TI9A](#) will be QRV from Cocos Island through 12 February, 160-6 CW & SSB. More info at <http://ti9a.info>. QSL via UA3DX

[515TT](#) will be QRV from Zanzibar (AF-032) thru 18 February, 160 – 10, CW SSB & RTTY. On FT 4 & FT 8 they will use [514ZZ](#). More information at <http://www.i2ysb.com/idi>. QSL via I2YSB

PP6ZZ is QRV as [PY0FF](#) from Fernando de Noronha (SA-003) thru 18 February, 160 – 10, CW SSB & Digital. QSL via W9VA

[5Z4/WA5A](#) will be QRV thru late March, holiday style, 40 20 & 15, SSB primarily. 160 & 80 are also possible. QSL via WA5A

DL2GAC will be QRV as [H44MS](#) 5 February – 20 April, 80 – 6, SSB. QSL via DL2GAC

G4WXJ will be QRV as [ZC4RH](#) 5 – 13 February, holiday style, CW SSB & FT8. QSL via G4WXJ

[N1TRK/6Y](#) will be QRV 8 – 20 February, 40 20 17 & 10, mainly FT 8 with some SSB. QSL via LotW.

[RI1ANC](#) is expected to be QRV starting 10 February from Vostok Station (AN-016). Operators and length of stay was not announced. QSL via RN1ON.

DL5MAE will be QRV as [3W2MAE](#) 13-20 February, 80 – 6, CW & SSB. He has a high local noise level. QSL via DL5MAE

[T45FM](#) will be QRV from Punta Maya Lighthouse (NA-015) 14 – 16 February, 160 – 10 SSB. QSL via RW6HS

[W8S](#) will be QRV from Swains Island 10 – 25 March. They will be running four stations from 2 camps 24 hours a day. More information at <https://swains2020.ildxt.eu/home>.

[A42K](#) will be QRV during the CQ WPX SSB contest, 28 – 29 March. QSL via EA5GL

QSL Routes

3W2MAE via DL5MAE	DA2025C via DM9TT	SN100BY via
3Z50DVP via	DU6/N6SS via N6SS	SP2PBM
SP6DVP	EA5U via EA5BB	SN95IARU via
3Z95IARU via	EA8/OL0M via	SP9YGD
SP3KWA	OK1CDJ	SO90PZK via
404T via YU1FW	EH5MCB via EA5BX	SP3PWL
5B60ALJ via	EM200ANT via UT7UA	SO95IARU via
5B4ALJ	H44MS via DL2GAC	SP5PPK
5I5TT via I2YSB	HU1DL via DL4SVA	T40DXE via CO8ZZ
5I5ZZ via I2YSB	J88HF via PA3C	TI2CDA via EA5GL
5Z4/G3AB via	JT5DX via JT1CO	TI9A via UA3DX
M0URX	LZ6C via LZ2UW	TI9C via XE1B
7X5NZ via EA7FTR	OR1Z via ON6IX	T45FM via RW6HS
8S3C via SK4AO	P40AA via DL4MM	TI7W via W4FS
9K2BS via EC6DX	PA03RXIT via	TM39PVJ via F8GGZ
A42K via EA5GL	PA3EFR	TO3FM via JJ2RCJ
C5YK via ON7YK	PY0FF via W9VA	TO5T via WB2REM
CP6LA via HA3JB	RIANC via RN1ON	Z81D via OM3JW
CT9/OG55W via	R900DM via RC1C	ZC4RH via G4WXJ
OH2OT	S01WS via EA2JG	ZS6CCY via K3IRV

Thanks to the NJDXA DX News Reflector, the DX-QSL Reflector, 425 DX News, OPDX News, DX Coffee, DX World.Net, ICPO Bulletin, & ARRL DX Bulletin for our DX News information. Thanks also to the ARRL DXCC Desk, & Bernie McClenny W3UR /The Daily DX for confirmations & additional information.



WASH Classifieds

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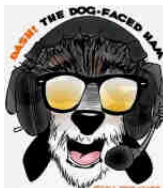
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US Amateurs by Class as of February 3rd, 2020:

	Novice	8,945
	Technician	418,395
	General	189,139
	Advanced	41,288
	Extra	154,616
	Club	12,728
	Total	825,111
All-Time High	02/03/2020	825,111

Last 90 Days:	New Amateurs	7,168
	Callsign Changes	2,558
	Class Changes	2,533
	No Longer Licensed	6,490
	All Updates (*)	27,724

(*) Includes renewals, address changes, etc.

Information gathered from FCC Daily Updates, courtesy of Hamdata.com

Amateur radio is featured in the publication, [ITU Guidelines for national emergency telecommunication plans](#), published by the International Telecommunication Union (ITU) Development Sector (ITU-D). The publication notes that radio amateurs have supported communication in emergency situations on a voluntary basis since the dawn of radio.

"They are experts in radio communications and have the equipment, skills and necessary frequencies allocated by ITU to deploy networks in emergency events quickly and efficiently," the publication says. ITU-D said amateur radio support offers "great coverage due to the large number of amateur radio stations available;" training programs and exercises have been developed for emergency communication; "qualified temporary volunteers who provide skills and experience essential for emergency telecommunications;" problem-solving skills and an ability to work with "often very limited resources," and the ability to work with alternative power sources.

Past ARRL President and IARU Secretary Rod Stafford W6ROD, represents the International Amateur Radio Union at ITU-D meetings. — *Thanks to Southgate Amateur Radio News; IARU*



FCC News

Courtesy of the American Radio Relay League

Newington, CT, January 24th, 2020 – At its January meeting, the ARRL Board of Directors instructed the League's FCC counsel to prepare a strong response to protect amateur access to spectrum in the 3 GHz range. In its *Notice of Proposed Rulemaking (NPRM)* in WT Docket 19-348, the FCC proposed to relocate all non-federal operations, including amateur uses, to spectrum outside the 3.3 – 3.55 GHz band. The Commission anticipates auctioning this spectrum to expand commercial use of 5G cellular and wireless broadband services, if agreement can be reached on relocation of — or sharing with — the federal incumbents that operate in the same band. [Publication](#) of the *NPRM* in the *Federal Register* on January 22nd established deadlines of February 21st for comments and March 23rd for reply comments.

The FCC has requested comment on the uses radio amateurs make of the spectrum and appropriate relocation options. Complicating matters is the fact that radio amateurs must consider the possibility that the immediately adjacent 3.1 – 3.3 GHz band is included in the spectrum that Congress has identified for similar study. FCC Commissioner Michael O'Rielly, in a December statement, referenced the fact that the lower band may also be considered for non-federal reallocation, potentially limiting relocation possibilities.

Amateurs make substantial use of the 3.3 – 3.5 GHz band that would be hard to replicate elsewhere, and they have filed more than 150 comments before the designated comment period even began. Among users looking at options are those who use this spectrum for Earth-Moon-Earth (moonbounce) communication, mesh networks, experiments with communication over long distances, radiosport, and amateur television. A portion of the band also is designated for use by amateur satellites in ITU Regions 2 and 3 (the Americas and Asia/Pacific).

A report is due by March 23rd from the National Telecommunications and Information Administration (NTIA) evaluating the feasibility of having federal users share all or part of the 3.1 – 3.55 GHz band with commercial wireless services. This report is required by the Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless (MOBILE NOW) Act. The results of the NTIA report will impact how much spectrum ultimately may be re-allocated for auction to wireless providers.

ARRL urges amateurs who comment to inform the FCC about the uses they make of the 3 GHz spectrum. Short comments and longer statements may be filed electronically. Visit the FCC ["How to Comment on FCC Proceedings"](#) page for more information. Commenters should reference WT Docket 19-348.



The premiere issue of ARRL's *On the Air* magazine has left the printer and is on its way to member subscribers! The magazine should be in mailboxes within the next 10 days. *On the Air* is the newest ARRL member benefit to help new licensees and beginner-to-intermediate radio communicators navigate the world of amateur radio.

Eligible US-based members can elect to receive *On the Air* or *QST* magazine in print when they join or when they renew their ARRL membership. All members will be able to access digital editions of *On the Air* magazine.

The first digital issue of *On the Air* will be available beginning January 14th, supported by a new version of ARRL's digital magazine app. With one app, members will be able to access *On the Air* and *QST*.

If you've downloaded the **WASHRag** from the N3SH web site, or picked up a copy from a friend... you can sign up to have the PDF copy sent directly to your email. You **do NOT** have to be a member of **WASH**!

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For Table Reservations, or More Information, Please Contact:

Carol Danko KB3GMN at (412) 884-1466 n3sbf@comcast.net
E-mail us directly at washarc@yahoo.com Check out our website too! www.n3sh.org

Please Note: Early Table Reservations must be paid in full on or before January 31st, 2020.

Reservations received after February 1st, 2020 must include payment in full.

Reserve now... we have sold out in advance ten years running!

Hamfest Table Reservation Form—Please PRINT LEGIBLY ALL INFORMATION

Name: _____ Email: _____

Address: _____ Phone: () _____ - _____

City: _____ State: _____ Zip: _____

Call Sign: _____

Tables WITH Electricity: _____ X \$15.00 = _____

Tables WITHOUT Electricity: _____ X \$12.00 = _____

5 Or More Tables w/o: _____ X \$10.00 = _____

Please make all checks payable to:
WIRELESS ASSOCIATION OF SOUTH HILLS
PLEASE MAIL RESERVATION TO:
WASHFEST 2020
c/o CAROL DANKO KB3GMN
4246 Seton Drive
Pittsburgh, PA 15227-1244

We reserve the right to resell any tables not occupied by 8 AM, unless prior arrangements have been made!



WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

Membership Application, New or Renewal



I would like to join WASH! I am interested in the following type of membership: ☐ **New Membership** ☐ **Membership Renewal**

(check quarter _____)
(check one)

	<input type="checkbox"/> 1st Qtr Jan-Mar	<input type="checkbox"/> 2nd Qtr Apr-Jun	<input type="checkbox"/> 3rd Qtr Jul-Sept	<input type="checkbox"/> 4th Qtr Oct-Dec
<input type="checkbox"/> (F1) Full Membership:	\$20.00	\$15.00	\$10.00	\$5.00
<input type="checkbox"/> (F2) Full Membership < 18 or > 65 yrs of age:	\$10.00	\$7.50	\$5.00	\$2.50
<input type="checkbox"/> (A1) Associate Membership:	\$10.00	\$7.50	\$5.00	\$2.50

☐ (FM1) Family Membership (\$3.00 x No. of household family members): \$ _____

Name(s): _____

Name: _____

Address: _____

City, State: _____

Home Phone: _____

Email Address: _____

New Members Only:

☐ I do NOT want to be added to the Club E-Mail Reflector

☐ I do NOT want to be added to the Electronic Newsletter Mailing List

[If you have an Email address, you Will be added to both lists UNLESS you choose to Opt-Out]

Signature: _____

Call Sign: _____

License Class: _____

Expires On: _____

Work Phone: _____

Birthday: _____

ARRL Member? ☐ Yes ☐ No Family ARRL Member? ☐ Yes ☐ No

Date: _____

Amount Enclosed: \$ _____

N3RDV has requested that all membership requests and renewals include an application so that his information is up to date

Please make your check or money order payable to the club treasurer, Mark Stabryla.
The Wireless Association of South Hills, Inc. reserves the right to accept or reject new memberships or renewals.
Please return completed membership form along with check/money order to the club treasurer or mail to:

WIRELESS ASSOCIATION OF SOUTH HILLS, INC.
c/o Mark Stabryla N3RDV, VP/Treasurer
1120 McKnight Drive
Bethel Park, PA 15102-2456



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Arghh!
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k1nss@dashtoons.com

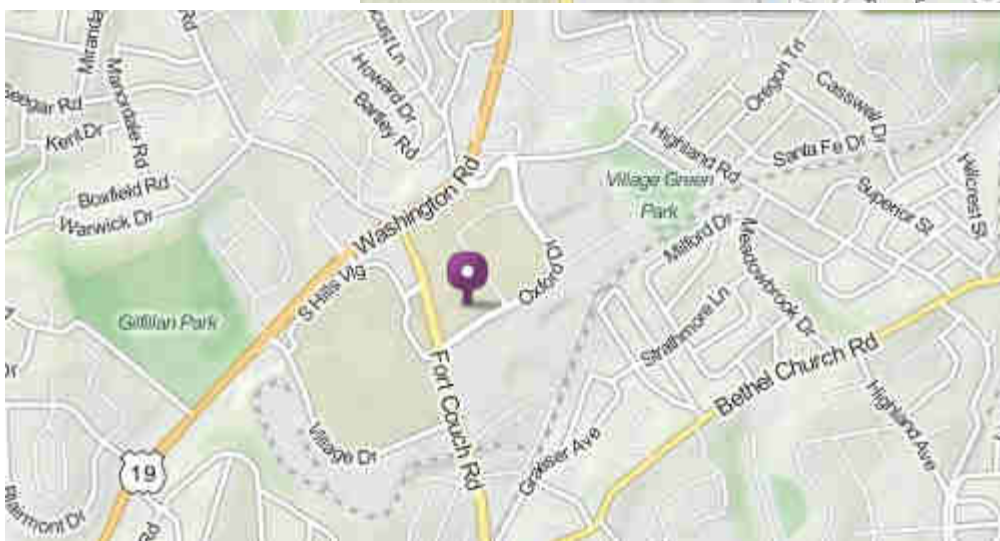
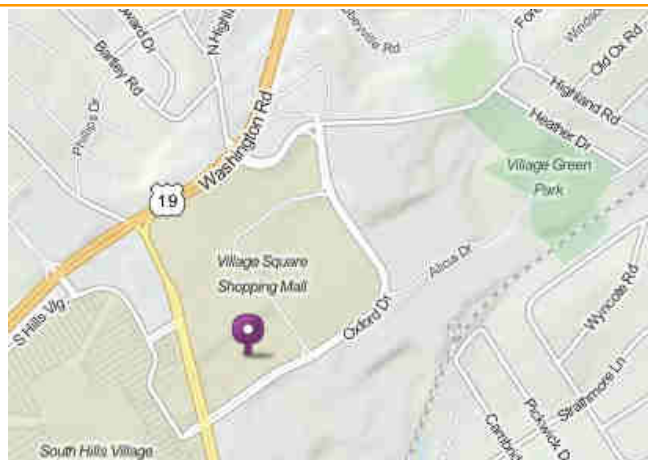


2020 WASH Meeting Location

St. Clair Hospital Outpatient Center Conference Room

2000 Oxford Drive, Bethel Park PA 15102

Adjacent to Village Square Mall, across Ft. Couch Road from
South Hills Village Mall, just off of US Route 19



The WASHRag

Wireless Association of South Hills, Inc.

Ron Notarius W3WN, Editor

3395 Rosewood Drive

Castle Shannon, PA 15234-2546



N3SH / WA3SH
NP2SH/B

www.n3sh.org
www.washarc.org

